Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Original) A human antibody which binds to AILIM.

2. (Original) The human antibody of claim 1, wherein said AILIM is derived from human.

3. (Original) A human monoclonal antibody which binds to AILIM or a portion thereof.

4. (Original) The human monoclonal antibody or a portion thereof of claim 3, wherein said AILIM is derived from human.

5. (Original) The human monoclonal antibody or a portion thereof of claim 3, wherein said human monoclonal antibody has an activity to inhibit a signal transduction into a cell mediated by AILIM.

6. (Original) The human monoclonal antibody or a portion thereof of claim 5, wherein said activity to inhibit a signal transduction is (a) or (b) of the followings:

(a) activity to inhibit proliferation of AILIM-expressing cells, or

(b) activity to inhibit cytokine production from AILIM-expressing cells.

7. (Original) The human monoclonal antibody or a portion thereof of claim 6, wherein said cytokine is one of the cytokines produced by Th1-type or Th2-type T cell.

8. (Original) The human monoclonal antibody or a portion thereof of claim 7, wherein said cytokine is interferon γ or interleukin 4.

9. (Original) The human monoclonal antibody or a portion thereof of claim 5, wherein said human monoclonal antibody has an activity to prevent mixed lymphocyte reaction.

10. (Original) The human monoclonal antibody or a portion thereof of claim 3, wherein said human monoclonal antibody has an activity to induce signal transduction into a cell mediated by AILIM.

11. (Original) The human monoclonal antibody or a portion thereof of claim 10, wherein said activity to induce signal transduction is (a) or (b) of the followings:

(a) activity to induce proliferation of AILIM-expressing cells, or

(b) activity to induce cytokine production from AILIM-expressing cells.

12. (Original) The human monoclonal antibody or a portion thereof of claim 11, wherein said cytokine is one of the cytokines produced by Th1-type or Th2-type T cell.

13. (Original) The human monoclonal antibody or a portion thereof of claim 12, wherein said cytokine is interferon γ or interleukin 4.

14. (Original) The human monoclonal antibody or a portion thereof of claim 3, wherein said human monoclonal antibody has an activity to induce antibody-dependent cytotoxicity to AILIM-expressing cells, and/or immune cytolysis or apoptosis of AILIM-expressing cells.

15. (Original) The human monoclonal antibody or a portion thereof of claim 3, wherein the binding rate constant (ka) between said monoclonal antibody and AILIM is 1.0×10^{3} (1/M.Sec) or more.

16. (Original) The human monoclonal antibody or a portion thereof of claim 15, wherein said binding rate constant (ka) is 1.0×10^{4} (1/M.Sec) or more.

17. (Original) The human monoclonal antibody or a portion thereof of claim 16, wherein said binding rate constant (ka) is 1.0×10^{5} (1/M.Sec) or more.

18. (Original) The human monoclonal antibody or a portion thereof of claim 3, wherein the dissociation rate constant (kd) between said monoclonal antibody and AILIM is 1.0×10^{-3} (1/Sec) or less.

19. (Original) The human monoclonal antibody or a portion thereof of claim 18, wherein said dissociation rate constant (kd) is 1.0×10^{-4} (1/Sec) or less.

20. (Original) The human monoclonal antibody or a portion thereof of claim 19, wherein said dissociation rate constant (kd) is 1.0×10^{-5} (1/Sec) or less.

21. (Original) The human monoclonal antibody or a portion thereof of claim 3, wherein the dissociation constant (Kd) between said monoclonal antibody and AILIM is 1.0×10^{-6} (M) or less.

22. (Original) The human monoclonal antibody or a portion thereof of claim 21, wherein said dissociation constant (Kd) is 1.0×10^{-7} (M) or less.

23. (Original) The human monoclonal antibody or a portion thereof of claim 22, wherein said dissociation constant (Kd) is 1.0×10^{-8} (M) or less.

24. (Original) The human monoclonal antibody or a portion thereof of claim 23, wherein said dissociation constant (Kd) is 1.0×10^{-9} (M) or less.

25. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein a V region DNA encoding a heavy chain variable region of said human monoclonal antibody is derived from either the human immunoglobulin heavy chain V gene segment 1-02 or 3-13.

26. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein a V region DNA encoding a light chain variable region of said human monoclonal antibody is derived from either the human immunoglobulin light chain V gene segment L5 or A27.

27. (Original) The human monoclonal antibody or a portion thereof of claim 25, wherein a V region DNA encoding a heavy chain variable region of said human monoclonal antibody is derived from either the human immunoglobulin heavy chain V gene segment 1-02 or 3-13, and wherein a V region DNA encoding a light chain variable region of said human monoclonal antibody is derived from either the human immunoglobulin light chain V gene segment L5 or A27.

28. (Original) The human monoclonal antibody or a portion thereof of claim 27, wherein the V region DNA encoding a heavy chain variable region of said human monoclonal antibody is derived from the human immunoglobulin heavy chain V gene segment 1-02, and the V region DNA encoding a light chain variable region of said human monoclonal antibody is derived from the human immunoglobulin light chain V gene segment L5.

29. (Original) The human monoclonal antibody or a portion thereof of claim 27, wherein the V region DNA encoding a heavy chain variable region of said human monoclonal antibody is derived from the human immunoglobulin heavy chain V gene segment 3-13, and the V region DNA encoding a light chain variable region of said human monoclonal antibody is derived from the human immunoglobulin light chain V gene segment A27.

30. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein a heavy chain variable region of said human monoclonal antibody has an amino acid sequence defined in any of the following (a) through (f):

(a) amino acid sequence comprising amino acids from position 20 through 117 of SEQ ID NO:28,

(b) amino acid sequence comprising amino acids from position 20 through 117 of SEQ ID NO:28 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

(c) amino acid sequence comprising amino acids from position 20 through 116 of SEQ ID NO:32,

(d) amino acid sequence comprising amino acids from position 20 through 116 of SEQ ID NO:32 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

(e) amino acid sequence comprising amino acids from position 20 through 116 of SEQ ID NO:36, or

(f) amino acid sequence comprising amino acids from position 20 through 116 of SEQ ID NO:36, in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

31. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein a heavy chain polypeptide of said human monoclonal antibody has an amino acid sequence defined in any of the following (a) through (f):

(a) amino acid sequence comprising amino acids from position 20 through 470 of SEQ ID NO:28,

(b) amino acid sequence comprising amino acids from position 20 through 470 of SEQ ID NO:28 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

(c) amino acid sequence comprising amino acids from position 20 through 470 of SEQ ID NO:32,

(d) amino acid sequence comprising amino acids from position 20 through 470 of SEQ ID NO:32 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

(e) amino acid sequence comprising amino acids from position 20 through 470 of SEQ ID NO:36, or

(f) amino acid sequence comprising amino acids from position 20 through 470 of SEQ ID NO:36 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

32. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein a light chain variable region of said human monoclonal antibody has an amino acid sequence defined in any of the following (a) through (f):

(a) amino acid sequence comprising amino acids from position 23 through 116 of SEQ ID NO:30,

(b) amino acid sequence comprising amino acids from position 23 through 116 of SEQ ID NO:30 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

(c) amino acid sequence comprising amino acids from position 21 through 116 of SEQ ID NO:34,

(d) amino acid sequence comprising amino acids from position 21 through 116 of SEQ ID NO:34 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

(e) amino acid sequence comprising amino acids from position 21 through 116 of SEQ ID NO:38, or

(f) amino acid sequence comprising amino acids from position 21 through 116 of SEQ ID NO:38 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

33. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein a light chain polypeptide of said human monoclonal antibody has an amino acid sequence defined in any of the following (a) through (f):

(a) amino acid sequence comprising amino acids from position 23 through 236 of SEQ ID NO:30,

(b) amino acid sequence comprising amino acids from position 23 through 236 of SEQ ID NO:30 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

(c) amino acid sequence comprising amino acids from position 21 through 236 of SEQ ID NO:34,

(d) amino acid sequence comprising amino acids from position 21 through 236 of SEQ ID NO:34 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

(e) amino acid sequence comprising amino acids from position 21 through 236 of SEQ ID NO:38, or

(f) amino acid sequence comprising amino acids from position 21 through 236 of SEQ ID NO:38 in which one or more amino acid residues are deleted or substituted, or to which one or more amino acid residues are inserted or added.

34. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein said human monoclonal antibody has the following characteristics (a) and (b):

(a) a heavy chain variable region has an amino acid sequence comprising the amino acid sequence from amino acid 20 through 117 according to SEQ ID NO:28, and

(b) a light chain variable region has an amino acid sequence comprising the amino acid sequence from amino acid 23 through 116 according to SEQ ID NO:30.

35. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein said human monoclonal antibody has the following characteristics (a) and (b):

(a) a heavy chain polypeptide has an amino acid sequence from amino acid 20 through 470 according to SEQ ID NO:28, and

(b) a light chain polypeptide has an amino acid sequence from amino acid 23 through 236 according to SEQ ID NO:30.

36. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein said human monoclonal antibody has the following characteristics (a) and (b):

(a) a heavy chain variable region has an amino acid sequence comprising the amino acid sequence from amino acid 20 through 116 according to SEQ ID NO:32, and

(b) a light chain variable region has an amino acid sequence comprising the amino acid sequence from amino acid 21 through 116 according to SEQ ID NO:34.

37. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein said human monoclonal antibody has the following characteristics (a) and (b):

(a) a heavy chain polypeptide has an amino acid sequence comprising the amino acid sequence from amino acid 20 through 470 according to SEQ ID NO:32, and

(b) a light chain polypeptide has an amino acid sequence comprising the amino acid sequence from amino acid 21 through 236 according to SEQ ID NO:34.

38. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein said human monoclonal antibody has the following characteristics (a) and (b):

(a) a heavy chain variable region has an amino acid sequence comprising the amino acid sequence from amino acid 20 through 116 according to SEQ ID NO:36, and

(b) a light chain variable region has an amino acid sequence comprising the amino acid sequence from amino acid 21 through 116 according to SEQ ID NO:38.

39. (Original) The human monoclonal antibody or a portion thereof of claim 4, wherein said human monoclonal antibody has the following characteristics (a) and (b):

(a) a heavy chain polypeptide has an amino acid sequence comprising the amino acid sequence from amino acid 20 through 470 according to SEQ ID NO:36, and

(b) a light chain polypeptide has an amino acid sequence comprising the amino acid sequence from amino acid 21 through 236 according to SEQ ID NO:38.

40. (Original) The human monoclonal antibody or a portion thereof of claim 3, wherein said human monoclonal antibody is a monoclonal antibody derived from a transgenic non-human mammal capable of producing human antibodies.

41. (Original) The human monoclonal antibody or a portion thereof of claim 40, wherein said human monoclonal antibody is obtained by immunizing transgenic non-human mammal capable of producing human antibody with AILIM-expressing cells, membrane fractions derived from said cells, whole molecules constituting AILIM or a portion thereof, or genes encoding AILIM or a portion thereof.

42. (Original) The human monoclonal antibody or a portion thereof of claim 40, wherein said transgenic non-human mammal is a transgenic mouse.

43. (Original) A DNA or a portion thereof encoding a polypeptide selected from the group consisting of (a) through (f) below:

(a) a polypeptide comprising the amino acid sequence from amino acid 20 through 117 according to SEQ ID NO:28,

(b) a polypeptide comprising the amino acid sequence from amino acid 23 through 116 according to SEQ ID NO:30,

(c) a polypeptide comprising the amino acid sequence from amino acid 20 through 116 according to SEQ ID NO:32,

(d) a polypeptide comprising the amino acid sequence from amino acid 21 through 116 according to SEQ ID NO:34,

(e) a polypeptide comprising the amino acid sequence from amino acid 20 through 116 according to SEQ ID NO:36, and

(f) a polypeptide comprising the amino acid sequence from amino acid 21 through 116 according to SEQ ID NO:38.

44. (Original) A DNA or a portion thereof encoding a polypeptide selected from the group consisting of (a) through (f) below:

(a) a polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:28,

(b) a polypeptide comprising the amino acid sequence from amino acids 23 through 236 according to SEQ ID NO:30,

(c) a polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:32,

(d) a polypeptide comprising the amino acid sequence from amino acids 21 through 236 according to SEQ ID NO:34,

(e) a polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:36, and

(f) a polypeptide comprising the amino acid sequence from amino acids 21 through 236 according to SEQ ID NO:38.

45. (Original) A DNA or a portion thereof selected from the group consisting of (a) through (f) below:

(a) a DNA comprising the nucleotide sequence from nucleotides 126 through 419 according to SEQ ID NO:27,

(b) a DNA comprising the nucleotide sequence from nucleotides 105 through 386 according to SEQ ID NO:29,

(c) a DNA comprising the nucleotide sequence from nucleotides 151 through 441 according to SEQ ID NO:31,

(d) a DNA comprising the nucleotide sequence from nucleotides 88 through 375 according to SEQ ID NO:33,

(e) a DNA comprising the nucleotide sequence from nucleotides 153 through 443 according to SEQ ID NO:35, and

(f) a DNA comprising the nucleotide sequence from nucleotides 93 through 380 according to SEQ ID NO:37.

46. (Original) A DNA or a portion thereof selected from a group consisting of (a) through (f) below:

(a) a DNA comprising the nucleotide sequence from nucleotides 69 through 1481 according to SEQ ID NO:27,

(b) a DNA comprising the nucleotide sequence from nucleotides 39 through 749 according to SEQ ID NO:29,

(c) a DNA comprising the nucleotide sequence from nucleotides 94 through 1506 defined in SEQ ID NO:31,

(d) a DNA comprising the nucleotide sequence from nucleotides 28 through 738 according to SEQ ID NO:33,

(e) a DNA comprising the nucleotide sequence from nucleotides 96 through 1508 according to SEQ ID NO:35, and

(f) a DNA comprising the nucleotide sequence from nucleotides 33 through 743 according to SEQ ID NO:37.

47. (Original) A vector comprising the DNA of claim 43.

48. (Original) The vector of claim 47 comprising a DNA according to any of the following (a) through (c):

(a) a DNA comprising the nucleotide sequence from nucleotides 126 through 419 according to SEQ ID NO:27,

(b) a DNA comprising the nucleotide sequence from nucleotides 151 through 441 according to SEQ ID NO:31, or

(c) a DNA comprising the nucleotide sequence from nucleotides 153 through 443 according to SEQ ID NO:35.

49. (Original) The vector of claim 47 comprising a DNA according to any of the following (a) through (c):

(a) a DNA comprising the nucleotide sequence from nucleotides 69 through 1481 according to SEQ ID NO:27,

(b) a DNA comprising the nucleotide sequence from nucleotides 94 through 1506 according to SEQ ID NO:31, or

(c) a DNA comprising the nucleotide sequence from nucleotides 96 through 1508 according to SEQ ID NO:35.

50. (Original) The vector of claim 47 comprising a DNA according to any of the following (a) through (c):

(a) a DNA comprising the nucleotide sequence from nucleotides 105 through 386 according to SEQ ID NO:29,

(b) a DNA comprising the nucleotide sequence from nucleotides 88 through 375 according to SEQ ID NO:33, or

(c) a DNA comprising the nucleotide sequence from nucleotides 93 through 380 according to SEQ ID NO:37.

51. (Original) The vector of claim 47 comprising a DNA according to any of the following (a) through (c):

(a) a DNA comprising the nucleotide sequence from nucleotides 39 through 749 according to SEQ ID NO:29,

(b) a DNA comprising the nucleotide sequence from nucleotides 28 through 738 according to SEQ ID NO:33, or

(c) a DNA comprising the nucleotide sequence from nucleotides 33 through 743 according to SEQ ID NO:37.

52. (Original) The vector of claim 47 comprising a DNA according to the following (a) and (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 126 through 419 according to SEQ ID NO:27, and

(b) a DNA comprising the nucleotide sequence from nucleotides 105 through 386 according to SEQ ID NO:29.

53. (Original) The vector of claim 47 comprising a DNA according to the following (a) and (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 69 through 1481 according to SEQ ID NO:27, and

(b) a DNA comprising the nucleotide sequence from nucleotides 39 through 749 according to SEQ ID NO:29.

54. (Original) The vector of claim 47 comprising a DNA according to the following (a) and (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 151 through 441 according to SEQ ID NO:31, and

(b) a DNA comprising the nucleotide sequence from nucleotides 88 through 375 according to SEQ ID NO:33.

55. (Original) The vector of claim 47 comprising a DNA according to the following (a) and (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 94 through 1506 according to SEQ ID NO:31, and

(b) a DNA comprising the nucleotide sequence from nucleotides 28 through 738 according to SEQ ID NO:33.

56. (Original) The vector of claim 47 comprising a DNA according to the following (a) and (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 153 through 443 according to SEQ ID NO:35, and

(b) a DNA comprising the nucleotide sequence from nucleotides 93 through 380 according to SEQ ID NO:37.

57. (Original) The vector of claim 47 comprising a DNA according to the following (a) and (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 96 through 1508 according to SEQ ID NO:35, and

(b) a DNA comprising the nucleotide sequence from nucleotides 33 through 743 according to SEQ ID NO:37.

58. (Original) A cell producing a human monoclonal antibody of claim 3.

59. (Original) The cell of claim 58, wherein said cell is a fused cell obtained by fusing B cell, derived from a mammal capable of producing said human monoclonal antibody, and myeloma cell derived from a mammal.

60. (Original) A genetic recombinant host transformed by transferring a DNA described below in (a) or a vector comprising said DNA, a DNA described below in (b) or a vector comprising said DNA, or both DNAs described below in (a) and (b) or a vector comprising both of said DNAs:

(a) a DNA encoding a heavy chain polypeptide or a portion thereof of a monoclonal antibody which binds to human AILIM; or

(b) a DNA encoding a light chain polypeptide or a portion thereof of a monoclonal antibody which binds to human AILIM.

61. (Original) The genetic recombinant host of claim 60, wherein said monoclonal antibody is a human monoclonal antibody.

62. (Original) The genetic recombinant host of claim 60, wherein said host is a mammalian cell.

63. (Original) The genetic recombinant host of claim 60, wherein said host is a mammalian fertilized egg.

64. (Original) The genetic recombinant host of claim 60, wherein said heavy chain polypeptide is one of the heavy chain polypeptides selected from the group consisting of the following (a) through (c):

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 117 according to SEQ ID NO:28,

(b) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 116 according to SEQ ID NO:32, and

(c) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 116 according to SEQ ID NO:36.

65. (Original) The genetic recombinant host of claim 60, wherein said heavy chain polypeptide is one of the heavy chain polypeptide selected from the group consisting of the following (a) through (c):

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:28,

(b) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:32, and

(c) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:36.

66. (Original) The genetic recombinant host of claim 60, wherein said light chain polypeptide is one of the light chain polypeptide selected from the group consisting of the following (a) through (c):

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 23 through 116 according to SEQ ID NO:30,

(b) a heavy chain polypeptide comprising the amino acid sequence from amino acids 21 through 116 according to SEQ ID NO:34, and

(c) a heavy chain polypeptide comprising the amino acid sequence from amino acids 21 through 116 according to SEQ ID NO:38.

67. (Original) The genetic recombinant host of claim 60, wherein said light chain polypeptide is one of the light chain polypeptide selected from the group consisting of the following (a) through (c):

(a) a light chain polypeptide comprising the amino acid sequence from amino acids 23 through 236 according to SEQ ID NO:30,

(b) a light chain polypeptide comprising the amino acid sequence from amino acids 21 through 236 according to SEQ ID NO:34, and

(c) a light chain polypeptide comprising the amino acid sequence from amino acids 21 through 236 according to SEQ ID NO:38.

68. (Original) The genetic recombinant host of claim 60, wherein said heavy chain and light chain polypeptides are those defined below in (a) and (b), respectively:

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 117 according to SEQ ID NO:28, and

(b) a light chain polypeptide comprising the amino acid sequence from amino acids 23 through 116 according to SEQ ID NO:30.

69. (Original) The genetic recombinant host of claim 60, wherein said heavy chain and light chain polypeptides are those defined below in (a) and (b), respectively:

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:28, and

(b) a light chain polypeptide comprising the amino acid sequence from amino acids 23 through 236 according to SEQ ID NO:30.

70. (Original) The genetic recombinant host of claim 60, wherein said heavy chain and light chain polypeptides are those defined below in (a) and (b), respectively:

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 116 according to SEQ ID NO:32, and

(b) a light chain polypeptide comprising the amino acid sequence from amino acids 21 through 116 according to SEQ ID NO:34.

71. (Original) The genetic recombinant host of claim 60, wherein said heavy chain and light chain polypeptides are those defined below in (a) and (b), respectively:

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:32, and

(b) a light chain polypeptide comprising the amino acid sequence from amino acids 21 through 236 according to SEQ ID NO:34.

72. (Original) The genetic recombinant host of claims 60, wherein said heavy chain and light chain polypeptides are those defined below in (a) and (b), respectively:

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 116 according to SEQ ID NO:36, and

(b) a light chain polypeptide comprising the amino acid sequence from amino acids 21 through 116 according to SEQ ID NO:38.

73. (Original) The genetic recombinant host of claim 60, wherein said heavy chain and light chain polypeptides are those defined below in (a) and (b), respectively:

(a) a heavy chain polypeptide comprising the amino acid sequence from amino acids 20 through 470 according to SEQ ID NO:36, and

(b) a light chain polypeptide comprising the amino acid sequence from amino acids 21 through 236 according to SEQ ID NO:38.

74. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said heavy chain polypeptide is a DNA defined in any of following (a) through (c):

(a) a DNA comprising the nucleotide sequence from nucleotides 126 through 419 according to SEQ ID NO:27,

(b) a DNA comprising the nucleotide sequence from nucleotides 151 through 441 according to SEQ ID NO:31, and

(c) a DNA comprising the nucleotide sequence from nucleotides 153 through 443 according to SEQ ID NO:35.

75. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said heavy chain polypeptide is a DNA defined in any of following (a) through (c):

(a) a DNA comprising the nucleotide sequence from nucleotides 69 through 1481 according to SEQ ID NO:27,

(b) a DNA comprising the nucleotide sequence from nucleotides 94 through 1506 according to SEQ ID NO:31, and

(c) a DNA comprising the nucleotide sequence from nucleotides 96 through 1508 according to SEQ ID NO:35.

76. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said light chain polypeptide is a DNA defined in any of following (a) through (c):

(a) a DNA comprising the nucleotide sequence from nucleotides 105 through 386 according to SEQ ID NO:29,

(b) a DNA comprising the nucleotide sequence from nucleotides 88 through 375 according to SEQ ID NO:33, and

(c) a DNA comprising the nucleotide sequence from nucleotides 93 through 380 according to SEQ ID NO:37.

77. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said light chain polypeptide is a DNA as defined in any of following (a) through (c):

(a) a DNA comprising the nucleotide sequence from nucleotides 39 through 749 according to SEQ ID NO:29,

(b) a DNA comprising the nucleotide sequence from nucleotides 28 through 738 according to SEQ ID NO:33, and

(c) a DNA comprising the nucleotide sequence from nucleotides 33 through 743 according to SEQ ID NO:37.

78. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said heavy chain polypeptide is a DNA described below in (a), and the DNA encoding said light chain polypeptide is a DNA as described below in (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 126 through 419 according to SEQ ID NO:27, and

(b) a DNA comprising the nucleotide sequence from nucleotides 105 through 386 according to SEQ ID NO:29.

79. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said heavy chain polypeptide is the DNA described below in (a), and the DNA encoding said light chain polypeptide is the DNA described below in (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 69 through 1481 according to SEQ ID NO:27, and

(b) a DNA comprising the nucleotide sequence from nucleotides 39 through 749 according to SEQ ID NO:29.

80. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said heavy chain polypeptide is the DNA described below in (a), and the DNA encoding said light chain polypeptide is the DNA described below in (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 151 through 441 according to SEQ ID NO:31, and

(b) a DNA comprising the nucleotide sequence from nucleotides 88 through 375 V SEQ ID NO:33.

81. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said heavy chain polypeptide is the DNA described below in (a), and the DNA encoding said light chain polypeptide is the DNA described below in (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 94 through 1506 according to SEQ ID NO:31, and

(b) a DNA comprising the nucleotide sequence from nucleotides 28 through 738 according to SEQ ID NO:33.

82. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said heavy chain polypeptide is the DNA described below in (a), and the DNA encoding said light chain polypeptide is the DNA described below in (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 153 through 443 according to SEQ ID NO:35, and

(b) a DNA comprising the nucleotide sequence from nucleotides 93 through 380 according to SEQ ID NO:37.

83. (Original) The genetic recombinant host of claim 60, wherein the DNA encoding said heavy chain polypeptide is the DNA described below in (a), and the DNA encoding said light chain polypeptide is the DNA described below in (b):

(a) a DNA comprising the nucleotide sequence from nucleotides 96 through 1508 according to SEQ ID NO:35, and

(b) a DNA comprising the nucleotide sequence from nucleotides 33 through 743 according to SEQ ID NO:37.

84. (Original) A human monoclonal antibody or a portion thereof produced by a genetic recombinant host (provided excluding the case where said host is a fertilized egg) of claim 60.

85. (Original) A pharmaceutical composition comprising the human antibody of claim 1, and a pharmaceutically acceptable carrier.

86. (Original) A pharmaceutical composition comprising the human monoclonal antibody or a portion thereof of claim 3, and a pharmaceutically acceptable carrier.

87. (Original) A pharmaceutical composition comprising a human monoclonal antibody or a portion thereof of claim 84, and a pharmaceutically acceptable carrier.

88. (Original) The pharmaceutical composition of claim 85, wherein said pharmaceutical composition is used to inhibit signal transduction into the cell mediated by AILIM.

89. (Original) The pharmaceutical composition of claim 85, wherein said pharmaceutical composition is used to prevent proliferation of AILIM-expressing cells.

90. (Original) The pharmaceutical composition of claim 85, wherein said pharmaceutical composition is used to prevent production of a cytokine from AILIM-expressing cells.

91. (Original) The pharmaceutical composition of claim 85, wherein said pharmaceutical composition is used to induce signal transduction into a cell mediated by AILIM.

92. (Original) The pharmaceutical composition of claim 85, wherein said pharmaceutical composition is used to induce proliferation of AILIM-expressing cells.

93. (Original) The pharmaceutical composition of claim 85, wherein said pharmaceutical composition is used to induce production of a cytokine from AILIM-expressing cells.

94. (Original) The pharmaceutical composition of claim 85, wherein said pharmaceutical composition is used to induce antibody-dependent cytotoxicity against AILIM-expressing cells, and/or immune cytolysis or apoptosis of AILIM-expressing cells.

95. (Original) A pharmaceutical composition for preventing, treating, or prophylaxis of delayed type allergy, comprising a substance having an activity in modulating signal transduction mediated by AILIM, and a pharmaceutically acceptable carrier.

96. (Original) The pharmaceutical composition of claim 95, wherein the substance is a protein substance.

97. (Original) The pharmaceutical composition of claim 96, wherein the protein substance is selected from the group consisting of:

a) an antibody which binds to AILIM or a portion thereof;

b) a polypeptide comprising the whole or a portion of an extracellular region of AILIM;

c) a fusion polypeptide comprising the whole or a portion of an extracellular region of AILIM, and the whole or a portion of a constant region of immunoglobulin heavy chain; and

d) a polypeptide which binds to AILIM.

98. (Original) The pharmaceutical composition of claim 97, wherein said antibody that binds to AILIM is a human antibody.

99. (Original) The pharmaceutical composition of claim 97, wherein said antibody that binds to AILIM is a human monoclonal antibody.

100. (Original) The pharmaceutical composition of claim 97, wherein said antibody against AILIM is a human monoclonal antibody produced by a genetic recombinant host transformed by transferring a DNA described below in (a) or a vector comprising said DNA, a DNA described below in (b) or a vector comprising said DNA, or both DNAs described below in (a) and (b) or a vector comprising both of said DNAs:

(a) a DNA encoding a heavy chain polypeptide or a portion thereof of a monoclonal antibody which binds to human AILIM; or

(b) a DNA encoding a light chain polypeptide or a portion thereof of a monoclonal antibody which binds to human AILIM..

101. (Original) The pharmaceutical composition of claim 95, wherein the substance is a non-protein substance.

102. (Original) The pharmaceutical composition of claim 101, wherein the non-protein substance is DNA, RNA, or a chemically synthesized compound.

103. (Original) A method for identifying substances that bind to AILIM or AILIM ligand comprising the following processes:

(a) preparing an insoluble carrier on which the entire extracellular region of AILIM or a portion thereof is immobilized;

(b) preparing a polypeptide comprising the whole extracellular region of AILIM ligand or a portion thereof labeled with a labeling material that emit a detectable signal;

(c) reacting the insoluble carrier in process(a) with the polypeptide in process (b);

(d) reacting the insoluble carrier of process (a), the polypeptide of process (b) and said substance to each other in any arbitrary orders;

(e) detecting the signal emitted from said labeling material contained in the complex produced in process (c), and the signal emitted from said labeling material contained in the complex produced in process (d), respectively; and

(f) comparing the magnitude of each of signals detected in process (e).

104. (Original) A method for identifying substances that bind to AILIM or AILIM ligand comprising the following processes:

(a) preparing an insoluble carrier on which the entire extracellular region of AILIM ligand or a portion thereof is immobilized;

(b) preparing a polypeptide comprising the whole extracellular region of AILIM or a portion thereof labeled with a labeling material that emit a detectable signal;

(c) reacting the insoluble carrier in process (a) with the polypeptide in process (b);

(d) reacting the insoluble carrier of process (a), the polypeptide of process (b) and said substance to each other in any arbitrary orders;

(e) detecting the signal emitted from said labeling material contained in the complex produced in process (c), and the signal emitted from said labeling material contained in the complex produced in process (d), respectively; and

(f) comparing the magnitude of each of signals detected in process (e).

105. (Original) The method of claim 103, wherein said polypeptide comprising the whole extracellular region of AILIM or a portion thereof is a fusion polypeptide comprising a polypeptide, comprising the whole extracellular region of AILIM or a portion thereof, and the whole constant region of immunoglobulin heavy chain or a portion thereof.

106. (Original) The method of claim 103, wherein said polypeptide comprising the whole extracellular region of AILIM ligand or a portion thereof is a fusion polypeptide

comprising a polypeptide, comprising the whole extracellular region of AILIM ligand or a portion thereof, and the whole constant region of immunoglobulin heavy chain or a portion thereof.

107. (Original) The method of claim 103, wherein said AILIM is a human AILIM.

108. (Original) The method of claim 103, wherein said AILIM ligand is a human AILIM ligand.

109. (New) A method of treating or preventing an autoimmune disorder, an allergic disorder, an inflammatory disorder, graft versus host reaction, graft versus host disease, or immune rejection accompanying transplantation of a tissue or organ in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a human antibody or portion thereof that binds to human AILIM, wherein:

(a) a V region DNA encoding a heavy chain variable region of the human antibody or portion thereof is from human immunoglobulin heavy chain V gene segment 1-02 or 3-13;

(b) a V region DNA encoding a light chain variable region of the human antibody or portion thereof is from human immunoglobulin light chain V gene segment L5 or A27; or

(c) a V region DNA encoding a heavy chain variable region of the human antibody or portion thereof is from human immunoglobulin heavy chain V gene segment 1-02 or 3-13, and a V region DNA encoding a light chain variable region of the human antibody or portion thereof is from human immunoglobulin light chain V gene segment L5 or A27.

110. (New) The method of claim 109, wherein the method comprises treating or preventing graft versus host reaction or graft versus host disease in the subject.

111. (New) The method of claim 109, wherein the method comprises treating or preventing immune rejection accompanying transplantation of a tissue or organ in the subject.

112. (New) The method of claim 111, wherein the method further comprises administering to the subject an effective amount of an immunosuppressant.

113. (New) A method of treating or preventing an autoimmune disorder, an allergic disorder, an inflammatory disorder, graft versus host reaction, graft versus host disease, or immune rejection accompanying transplantation of a tissue or organ in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a human antibody or portion thereof that binds to human AILIM, wherein a heavy chain variable region of the human antibody or portion thereof comprises an amino acid sequence selected from the group consisting of:

(a) amino acids from position 20 through 117 of SEQ ID NO:28;

(b) amino acids from position 20 through 117 of SEQ ID NO:28 in which one to ten amino acid residues are deleted, substituted, or added;

(c) amino acids from position 20 through 116 of SEQ ID NO:32;

(d) amino acids from position 20 through 116 of SEQ ID NO:32 in which one to ten amino acid residues are deleted, substituted, or added;

(e) amino acids from position 20 through 116 of SEQ ID NO:36; and

(f) amino acids from position 20 through 116 of SEQ ID NO:36, in which one to ten amino acid residues are deleted, substituted, or added.

114. (New) A method of treating or preventing an autoimmune disorder, an allergic disorder, an inflammatory disorder, graft versus host reaction, graft versus host disease, or immune rejection accompanying transplantation of a tissue or organ in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a human antibody or portion thereof that binds to human AILIM, wherein a light chain variable region of the human antibody or portion thereof comprises an amino acid sequence selected from the group consisting of:

(a) amino acids from position 23 through 116 of SEQ ID NO:30;

(b) amino acids from position 23 through 116 of SEQ ID NO:30 in which one to ten amino acid residues are deleted, substituted, or added;

(c) amino acids from position 21 through 116 of SEQ ID NO:34;

(d) amino acids from position 21 through 116 of SEQ ID NO:34 in which one to ten amino acid residues are deleted, substituted, or added;

(e) amino acids from position 21 through 116 of SEQ ID NO:38; and

(f) amino acids from position 21 through 116 of SEQ ID NO:38 in which one to ten amino acid residues are deleted, substituted, or added.

115. (New) A method of inhibiting proliferation, production of a cytokine, or AILIM-mediated signal transduction in an AILIM-expressing cell, the method comprising contacting the cell with an effective amount of a composition comprising a human antibody or portion thereof that binds to human AILIM, wherein:

(a) a V region DNA encoding a heavy chain variable region of the human antibody or portion thereof is from human immunoglobulin heavy chain V gene segment 1-02 or 3-13;

(b) a V region DNA encoding a light chain variable region of the human antibody or portion thereof is from human immunoglobulin light chain V gene segment L5 or A27; or

(c) a V region DNA encoding a heavy chain variable region of the human antibody or portion thereof is from human immunoglobulin heavy chain V gene segment 1-02 or 3-13, and a V region DNA encoding a light chain variable region of the human antibody or portion thereof is from human immunoglobulin light chain V gene segment L5 or A27.

116. (New) A method of inhibiting proliferation, production of a cytokine, or AILIM-mediated signal transduction in an AILIM-expressing cell, the method comprising contacting the cell with an effective amount of a composition comprising a human antibody or portion thereof that binds to human AILIM, wherein a heavy chain variable region of the human antibody or portion thereof comprises an amino acid sequence selected from the group consisting of:

(a) amino acids from position 20 through 117 of SEQ ID NO:28;

(b) amino acids from position 20 through 117 of SEQ ID NO:28 in which one to ten amino acid residues are deleted, substituted, or added;

(c) amino acids from position 20 through 116 of SEQ ID NO:32;

(d) amino acids from position 20 through 116 of SEQ ID NO:32 in which one to ten amino acid residues are deleted, substituted, or added;

(e) amino acids from position 20 through 116 of SEQ ID NO:36; and

(f) amino acids from position 20 through 116 of SEQ ID NO:36, in which one to ten amino acid residues are deleted, substituted, or added.

117. (New) A method of inhibiting proliferation, production of a cytokine, or AILIM-mediated signal transduction in an AILIM-expressing cell, the method comprising contacting the cell with an effective amount of a composition comprising a human antibody or portion thereof that binds to human AILIM, wherein a light chain variable region of the human antibody or portion thereof comprises an amino acid sequence selected from the group consisting of:

(a) amino acids from position 23 through 116 of SEQ ID NO:30;

(b) amino acids from position 23 through 116 of SEQ ID NO:30 in which one to ten amino acid residues are deleted, substituted, or added;

(c) amino acids from position 21 through 116 of SEQ ID NO:34;

(d) amino acids from position 21 through 116 of SEQ ID NO:34 in which one to ten amino acid residues are deleted, substituted, or added;

(e) amino acids from position 21 through 116 of SEQ ID NO:38; and

(f) amino acids from position 21 through 116 of SEQ ID NO:38 in which one to ten amino acid residues are deleted, substituted, or added.